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PATENT APPLICATION
Mo4857
LeA 31,690

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF)
KIRKOR SIRINYAN ET AL) GROUP NO.: 1616
SERIAL NUMBER: 09/155,849) EXAMINER: N. LEVY
FILED: OCTOBER 2, 1998)
TITLE: NEW INSECTICIDE)
SUSPENSION CONCENTRATES)

#20
HHD
9.27.02

Appeal Brief

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

This Brief, submitted in triplicate, is an appeal from the Final Office Action of the Examiner dated April 18, 2002 in which rejection of Claim 1 was maintained.

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an enveloped addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231

9/9/02

Date

Godfried R. Akoni, Reg. No. 28,779

Name of applicant/assignee or Registered Representative

Signature

September 9, 2002

Date

I. REAL PARTY IN INTEREST

The real party in interest for the present appeal is the assignee Bayer AG.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of other appeals or interferences that will directly affect or be directly affected by or having a bearing on the present appeal.

III. STATUS OF CLAIMS

The above-referenced application was filed with Claim 1 to which was added Claim 2 by way of amendment. Claim 2 was cancelled in an amendment dated January 25, 2002. Claim 1, which is pending, stands rejected and is the subject of this appeal.

IV. STATUS OF AMENDMENTS

Appellants elected not to file amendments after final rejection, given that the issues in the case have been presented in an original and a continuing prosecution application to no avail.

V. SUMMARY OF THE INVENTION

The invention addresses the need for aqueous suspensions of solid active compounds. For many aqueous suspensions, the challenge in preparing them resides in making them stable in a cost-effective manner, without using solvents systems that raise questions about their adverse environmental effect. Appellants have provided an aqueous suspension, which meets the challenge. The aqueous suspension comprises:

- a) 0.1 to 12.5% of an active compound in the form of β -cyfluthrin applied as a coating to an inorganic carrier having a particle size of 1 to 30 μm ,
- b) 2.5 to 10% auxiliaries,
- c) 62.5 to 97.4% of water,
- d) 0 to 15% of glycerol;

the percentages are by weight of the suspension.

The aqueous suspension is cost effective; has excellent storage stability, very good dispersibility in water and, is free of environmental problems associated with solvents. Thus, formulations of the aqueous suspension are particularly suitable for preparing spray liquids for professional use in pest control in households, industrial buildings and building for livestock. See the captioned application at page 2, lines 9-13.

VI. ISSUES

- (1) Whether the Examiner erred in concluding that Claim 1 is anticipated under 35 USC 102(b) over Ackerman, EP 0029626 (hereinafter Ackerman) in the absence of a prima facie factual showing of substantial identity.
- (2) Whether the Examiner erred in concluding that the Claim 1 is obvious under 35 USC 103(a) over Ackerman, in the absence of a prima facie factual showing of basis for modification of the prior art to the claim with a reasonable expectation of success.

VII. GROUPING OF CLAIMS

Given that a single claim is being appealed, the requirement for grouping claims is not applicable.

VIII. ARGUMENTS

Summary of Appellants' Arguments

The element of claim relating solid active compounds coated on carriers in the manner of this invention is completely lacking in Ackerman. Therefore, Ackerman is not substantially identical to the claim and does not anticipate the claim.

The claim is unobvious because Ackerman lacks a basis for modifying the referenced invention to the claim with a reasonable expectation of success. At any rate, any presumption of obviousness is rebutted by the properties and advantages: cost effectiveness, excellent storage stability, very good dispersibility in

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water, and freedom from environmental problems associated with solvents.

Answer to Issue 1

The Examiner erred in concluding that the claim is anticipated by failing to show that the elements of the claim with particular relevance to the element of coating a carrier with a **solid** active ingredient. It is well established in the law that the identical invention in the prior art must be shown in as complete detail as in contained in the claim, Richardson v. Suzuki Motor Co 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). In this case, the Examiner has failed to show the identical invention in Ackerman, which relates to coating a carrier with a **liquid or semi-solid** active ingredient.

The lack of factual showing can be discerned from the Examiner's statements of the rejection, as discussed below.

In Paper Number 5 (the first office action), Claim 1 is rejected over Ackerman on the grounds that:

"See p.2. 0.5-25 micron inorganic carrier are coated with pyrethroid insecticides with auxiliary dispersant at 0.1-30 g/L of aqueous suspension – See Example 1, 2-"B" in 2 is of the instant %."

To be exact, Ackerman teaches inorganic carriers coated with liquid or semi-solid pyrethroids. Hence the claim was amended to exclude liquid or semi-solid pyrethroids as discussed more fully hereinafter.

In Paper Number 15, (Office Action) Claim 1 was rejected under 35 USC 102(b) as anticipated on the grounds that:

"Applicant argues the actives are not solid; instant p. 3 shows preferred pyrethroids include cypermethrin. Example of Ackerman uses cypermethrin. Applicant should show how applicants' cypermethrin is solid, while Ackerman's is not. See p.6 of Ackerman; the carrier is coated with pyrethroid; The instant invention as claimed."

To the extent that Ackerman classified its pyrethroids as liquid or semi-solid pyrethroids, Appellants were by no means suggesting that cypermethrin was in a solid form. To err on the side of excess, Appellants amended the claim to recite β -cyfluthrin.

In Paper Number 12 (Advisory Action) the Examiner states that:

"There is no disclosure of solid active coating of a carrier-only after treatment of solvated active, is free finely pulverulent active added

(p.4, line 4 – 11). Thus, as claimed and disclosed, the prior art provides the instant invention – no criticality, unexpected, or unobvious results were shown by applicants of β -cyfluthrin [on] the carrier, coated as disclosed.”

To the extent that Ackerman explicitly discloses that its invention relates to aqueous suspension of liquid or semi-solid pyrethroids, the Examiner's position that Ackerman teaches β -cyfluthrin which is ordinarily available in a solid form is untenable.

In Paper Number 18 (First Office Action Final after filing of Continuing Prosecution Application states that:

“The rejection of record is maintained. See p.2, (b) the pyrethroid is distributed and absorbed on the carrier. ... Ackerman did not specify TiO_2 , Al_2O_3 , Mg O or silica as carrier;...with free particulate cyfluthrin would distinguish.”

This rejection has been addressed in the response to the previous office actions or is otherwise unclear. The rejection of record, which construes the term pyrethroid to mean a solid pyrethroid has been addressed above. The rejection relating to Ackerman 's failure to teach TiO_2 , Al_2O_3 , Mg O or silica carrier is unclear.

In short, Appellants interpreted the statements of rejection, in the best light for the Examiner, to mean that he has construed the claim to read on aqueous suspension comprising active ingredients, which were not in the form of solids. As such in response to rejection in Paper Number 5, Appellants amended the claim to read on a solid active ingredient. In response to rejection in Paper Number 8, Appellants further amended the claim to specify the active ingredient as β -cyfluthrin, which is an active ingredient in a solid form. As such, Appellants amended the claim to more clearly and distinctly recite aqueous suspensions comprising active ingredients in the form of solids. With this amendment the claim differs from Ackerman.

Read for what it stands, Ackerman relates to formulations based on liquid or semi-solid active ingredients coated on solid carriers, which are suspended in water using several auxiliary agents. Illustratively, Ackerman employs cypermethrin, which is a liquid pyrethroid. In contrast the claim recites a solid pyrethroid, i.e., β -cyfluthrin.

The closest Ackerman comes to the claim is in the background information, Mo4857

where it states the desirability of suspension concentrates and pyrethroids, generally, at page 2, lines 3-14:

"Although pesticides in the form of emulsifiable concentrates are preferred ... they suffer from the disadvantage of being based on an organic, normally aromatic solvent system and thus attract criticism on toxicological and environmental grounds. This problem can be overcome by formulating the pesticide as water-based suspension commonly known as 'suspension concentrate' formulation which consists of finely-divided water-insoluble normally solid pesticides suspended in water. Many pyrethroid insecticides are liquid or semi-solid materials, and therefore not susceptible to formulation as suspension concentrates.

Accordingly, the present invention provides a water-based pesticidal suspension comprising (a) a liquid or semi-solid pyrethroid insecticide ..."
(Delineation is Appellants' for emphasis).

The general reference to suspension concentrates and pyrethroids does not constitute a factual showing upon which one can base anticipation, absent a showing that the skilled artisan would envisage aqueous suspension comprising a solid active ingredient from Ackerman's general reference, In re Petering 133 USPQ 275 (CCPA 1968). From the foregoing it is quite clear that Ackerman fails to teach an aqueous suspension comprising a carrier coated with a solid pyrethroid. Therefore, Ackerman does not anticipate the claim. Appellants, therefore, pray for the reversal of the anticipation rejection.

Appellants pray for the reversal of the obviousness rejection because the Examiner has failed to establish a prima facie case, showing a basis for modifying the referenced invention to the claims with a reasonable expectation of success. To the contrary, the Examiner's conclusion of obviousness fails to recognize the difference between the claim and Ackerman. For their part, Appellants have noted that the difference resides in Ackerman's failure to teach the element of the claim relating to a solid active ingredient. Ackerman lacks any basis for modifying its liquid or semi-solid based suspension to a solid based suspension with a reasonable expectation of success. An attempt to modify Ackerman to the claim is unlikely to be successful. Were one to employ a semi-solid active compound of Ackerman in an attempt to prepare the claim-recited suspension, the resulting suspension would be plagued with problems of agglomeration of fine particles. As such, one would be

hard pressed to argue that Ackerman suggests the claim with a reasonable expectation of success. Conversely, β -cyfluthrin would be unsuitable in the preparation of Ackerman's suspension. For, β -cyfluthrin, which is a solid would not be soluble in the emulsifying agents described by Ackerman. Consequently, one would obtain a combination of solid β -cyfluthrin particles and separate particles of the carrier. As such, the active compound would not coat the carrier. In view of the foregoing Appellants submit the record lacks a basis for modifying the prior art to the claim with a reasonable expectation of success. Therefore, the claim is not rendered obvious by Ackerman. Appellants, therefore, pray for the reversal of the obviousness rejection. Finally, any presumption of obviousness is rebutted by the properties and advantages of the claimed aqueous suspension. The claimed aqueous suspension is cost effective; has excellent storage stability, very good dispersibility in water, and is free of problem associated with solvents, and the attendant adverse environmental effects.

In view of the foregoing, Appellants pray that the Examiner be reversed and instructed by the Board to allow the subject claim.

Respectfully submitted,

By



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X. APPENDIX - CLAIMS ON APPEAL

1. An aqueous suspension of insecticidally active compounds comprising:
 - a) 0.1 to 12.5% of an active compound in the form of a solid β -cyfluthrin applied as a coating to an inorganic carrier having a particle size of 1 to 30 μm ,
 - b) 2.5 to 10% auxiliaries,
 - c) 62.5 to 97.4% of water,
 - d) 0 to 15% of glycerol,the percentages are % by weight of the suspension.